

Claims

1. A solder paste comprising a first solder alloy powder, a second solder alloy powder, and a flux, characterized in that the solder alloy of the first solder alloy powder and the solder alloy of the second solder alloy powder have a difference of at least 10°C in their main peak temperatures measured by differential thermal analysis, and the composition after melting of the mixed powders of the first and second lead-free solder alloy powders is, in mass %, 3 - 4% Ag, 3 - 10% In, and a balance of Sn.

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2. A solder paste as set forth in claim 1, characterized in that the first solder alloy powder is a powder of an alloy comprising, in mass %, 3 - 4% Ag, 6 - 20% In, and a balance of Sn, and the second solder alloy powder is a powder of an alloy comprising, in mass %, 3 - 4% Ag and a balance of Sn.

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3. A solder paste comprising a first solder alloy powder, a second solder alloy powder, and a flux, characterized in that the solder alloy of the first solder alloy powder and the solder alloy of the second solder alloy powder have a difference of at least 10°C in their main peak temperatures measured by differential thermal analysis, the solder alloys of the first solder alloy powder and/or the second solder alloy powder contain a total of at most 1 mass % of Bi, and the composition after melting of the mixed powders of the first and second lead-free solder alloy powders is, in mass %, 3 - 4% Ag, 3 - 10% In, at most 1% Bi, and a balance of Sn.

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4. A solder paste as set forth in claim 3, characterized in that the first solder alloy powder is a powder of an alloy comprising, in mass %, 3 - 4% Ag, 6 -

20% In, and a balance of Sn, and the second solder alloy powder is a powder of an alloy comprising, in mass %, 3 - 4% Ag and a balance of Sn, and the solder alloys of the first solder alloy powder and/or the second solder alloy powder contain a total of at most 1 mass % of Bi.

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5. A solder paste comprising a first solder alloy powder, a second solder alloy powder, and a flux, characterized in that the first solder alloy powder and the second solder alloy powder have a difference of at least 10°C in their main peak temperatures measured by differential thermal analysis, the solder alloy of  
10 the second solder alloy powder contains at most 1 mass % of Cu, and the composition after melting of the mixed powders of the first and second lead-free solder alloy powders is, in mass %, 3 - 4% Ag, 3 - 10% In, at most 1% Cu, and a balance of Sn.

15 6. A solder paste as set forth in claim 5, characterized in that the first solder alloy powder is a powder of an alloy comprising, in mass %, 3 - 4% Ag, 6 - 20% In, and a balance of Sn, and the second solder alloy powder is a powder of an alloy comprising, in mass %, 3 - 4% Ag, at most 1% Cu, and a balance of Sn

20 7. A solder paste as set forth in claim 5 or claim 6 wherein the solder alloys of the first solder alloy powder and/or the second solder alloy powder contain a total of at most 1 mass % of Bi.